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PSD95 Antibody
PSD 95 Antibody, Clone 7E3
Catalog # ASM10035

Specification

PSD95 Antibody - Product Information

Application	**WB, IHC, ICC, AM**
Primary Accession	P31016
Other Accession	NP_062567.1
Host	**Mouse**
Isotype	**IgG1**
Reactivity	**Human, Mouse, Rat, Bovine**
Clonality	**Monoclonal**

Description
Mouse Anti-Rat PSD95 Monoclonal IgG1

Target/Specificity
Detects ~100kDa. An additional protein of >100kDa is also detected. Additional cross-reactive bands are detected at ~75kDa and 50kDa in rat and mouse samples.

Other Names
PSD 95 Antibody, PSD-95 Antibody, DLG4 Antibody, SAP90 Antibody, Synapse-associated protein 90 Antibody, Postsynaptic density protein 95 Antibody, Disks large homolog 4 Antibody

Immunogen
Recombinant rat PSD-95

Purification
Protein G Purified

Storage	**-20ºC**

Storage Buffer
PBS pH7.4, 50% glycerol, 0.09% sodium azide

Shipping Temperature	**Blue Ice or 4ºC**

Certificate of Analysis
1 µg/ml was sufficient for detection of PSD-95 on 20 µg rat brain tissue extract by ECL immunoblot analysis using Goat Anti-Mouse IgG: HRP as the secondary.

Cellular Localization
Cell Membrane | Cell Junction | Synapse | Postsynaptic Cell Membrane | Postsynaptic Density | Cell Projection | Axon

PSD95 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides

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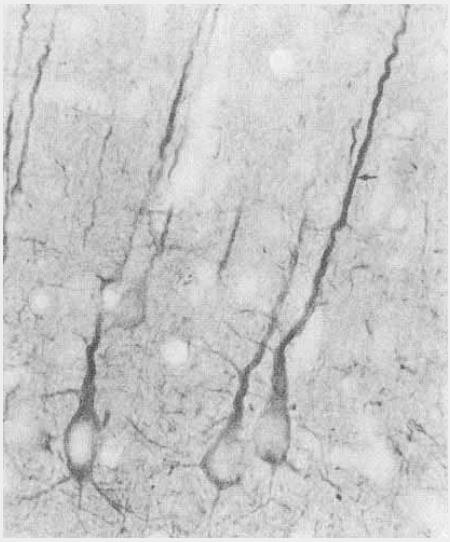
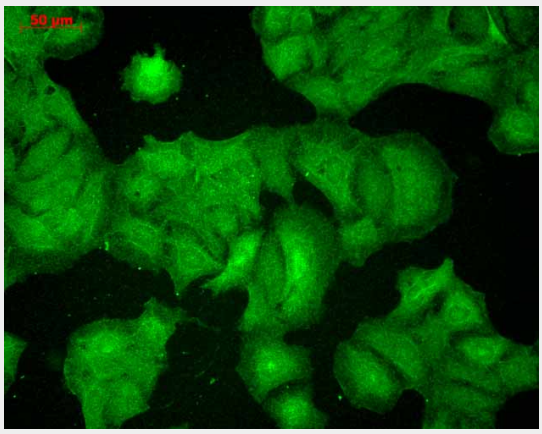
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PSD95 Antibody - Images



Immunohistochemistry analysis using Mouse Anti-PSD95 Monoclonal Antibody, Clone 7E3 (ASM10035). Tissue: Neocortex. Species: Rat. Primary Antibody: Mouse Anti-PSD95 Monoclonal Antibody (ASM10035) at 1:1000.



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-PSD95 Monoclonal Antibody, Clone 7E3 (ASM10035). Tissue: HaCaT cells. Species: Human. Fixation: Cold 100% methanol for 10 minutes at -20°C. Primary Antibody: Mouse Anti-PSD95 Monoclonal Antibody (ASM10035) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Filamentous-like staining.

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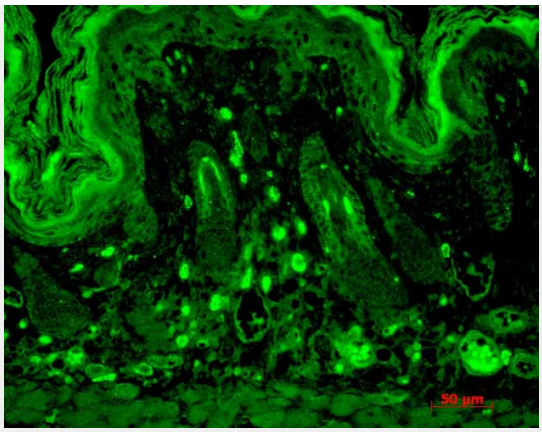
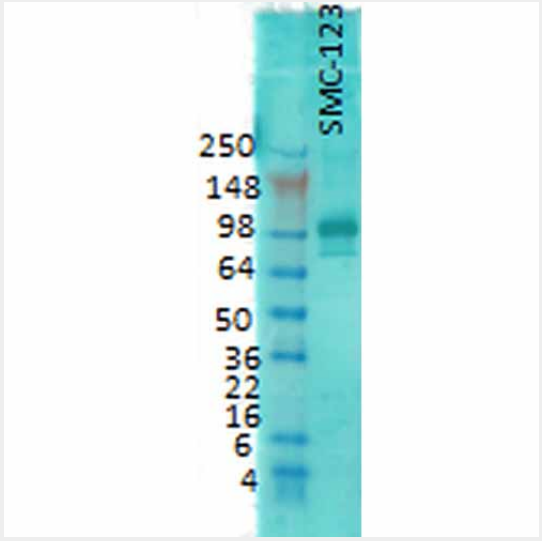


Immunohistochemistry analysis using Mouse Anti-PSD95 Monoclonal Antibody, Clone 7E3 (ASM10035). Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-PSD95 Monoclonal Antibody (ASM10035) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Basal cell staining in the epidermis, some hair follicle staining, dermal staining.



Western Blot analysis of Rat brain membrane lysate showing detection of PSD95 protein using Mouse Anti-PSD95 Monoclonal Antibody, Clone 7E3 (ASM10035). Primary Antibody: Mouse Anti-PSD95 Monoclonal Antibody (ASM10035) at 1:1000.

PSD95 Antibody - Background

Postsynaptic Density protein 95 (PSD95), also known as Synapse associated protein 90kDa, is a member of the membrane-associated guanylate kinase (MAGUK) family of proteins. PSD95 is a scaffolding protein and is involved in the assembly and function of the postsynaptic density complex (1). These family members consist of an N-terminal variable segment followed by three amino-terminal PDZ domains, an upstream SH3 domain and an inactive carboxyl-terminal guanylate kinase (GK) domain. The first and second PDZ domain localize NMDA receptors and K+ channels to synapses, and the third binds to neuroligins which are neuronal cell adhesion molecules that interact with b-neurexins and form intercellular junctions. PSD-95 also binds to neuronal nitric oxide synthase, possibly through interactions between PDZ domains present on both proteins (2). Thus different PDZ domains of PSD-95 might be specialized for distinct functions (3, 4).
PSD95 participates in synaptic targeting of AMPA receptors through an indirect manner involving Stargazin and related transmembrane AMPA receptor regulatory proteins (TARPs) (5). The protein is implicated in experience dependent plasticity and plays an indispensable role in learning (6). Mutations in PSD95 are associated with autism (7).

PSD95 Antibody - References

1. Chetkovich D.M., Bunn R.C., Kuo S.H., Kawasaki Y., Kohwi M., and Bredt D.S. (2002) J Neurosci. 22(15): 6415-25.
2. Cao J., Viholainen J.I., Dart C., Warwick H.K., Levland M.L. and Courtney M.J. (2005) J Cell Biol. 168(1): 117-26.
3. Kennedy M. (1997) Trends in Neurosci. 6: 264-268.
4. Irie M. et al. (1997) Science 277(5331): 1511-5.
5. Cai C. et al. (2006) J Biol Chem. 281: 4267-73.
6. Yao W.D. et al. (2004) Neuron 41: 625-38.
7. Cline H. (2005) Curr Biol. 15: R203-5.